

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sesptal623zct

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 CA/Caplus records now contain indexing from 1907 to the present

NEWS 4 INPADOC: Legal Status data reloaded
NEWS 5 DISCABS now available on STN
NEWS 6 PCFTUL: Two new display fields added
NEWS 7 BIOSIS file reloaded and enhanced
NEWS 8 BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS 9 MSDS-CCOHS file reloaded
NEWS 10 CABA reloaded with left truncation
NEWS 11 IMS file names changed
NEWS 12 Experimental property data collected by CAS now available in REGISTRY

NEWS 13 STN Entry Date available for display in REGISTRY and CA/Caplus
NEWS 14 DGENE: Two new display fields added
NEWS 15 BIOTECHNO no longer updated
NEWS 16 CROPV no longer updated; subscriber discount no longer available
NEWS 17 Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS 18 IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS 19 ABI-INFORM now available on STN

NEWS EXPRESS DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Db(JP),
AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:36:36 ON 08 JAN 2004

=> file reg
COST IN U.S. DOLLARS

SINCE FILE TOTAL
ENTRY SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 13:36:41 ON 08 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JAN 2004 HIGHEST RN 634878-43-6
DICTIONARY FILE UPDATES: 6 JAN 2004 HIGHEST RN 634878-43-6

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registrys.html>

=> s lipase
L1 2987 LIPASE

=> s ruthenium
L2 109832 RUTHENIUM

=> s 12 and complex
806576 COMPLEX
1189 COMPLEXES
807706 COMPLEX

L3 30756 L2 AND COMPLEX
(COMPLEX OR COMPLEXES)

=> file caplus
COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE
ENTRY SESSION
13.71 13.92

FILE 'CAPLUS' ENTERED AT 13:37:06 ON 08 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 8 Jan 2004 VOL 140 ISS 2
FILE LAST UPDATED: 7 Jan 2004 (20040107/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

UPDATED
STN SEARCH
TRANSCRIPT
- DON'T REMOVE
09/08/2006

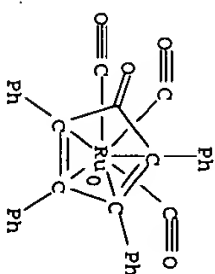
=> s 11 and 13
40511 L1
13647 L3
L4 31 L1 AND L3
=> s 14 and (racemi? or resol?)
39218 RACEMI?
442012 RESOL?
L5 23 L4 AND (RACEMI? OR RESOL?)
=> d 1-23 ibib abs hitstr
L5 ANSWER 1 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:417577 CAPLUS
DOCUMENT NUMBER: 139:6672
TITLE: Process for the synthesis of (R)-1-(3,5-bis(trifluoromethyl)phenyl)ethan-1-ol and esters thereof by dynamic kinetic resolution
Broxterman, Quirinus Bernardus; Verzijl, Gerardus Karel Maria
INVENTOR(S): Merck & Co., Inc., USA
PATENT ASSIGNEE(S): PCT Int. Appl., 44 pp.
SOURCE: CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003043575	A2	20030530	WO 2002-US36969	20021115
WO 2003043575	A3	20031016		

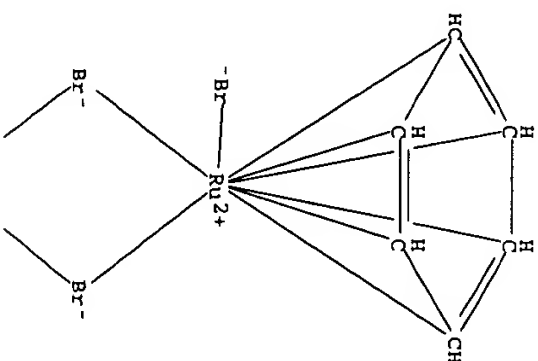
W: AE, AG, AL, AM, AT, AV, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MM, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG

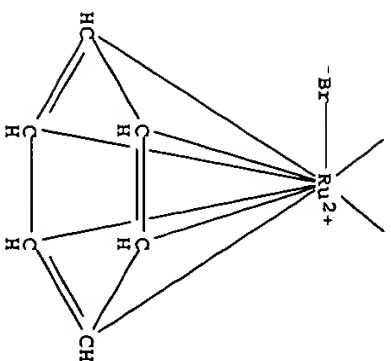
PRIORITY APPL. INFO.: US 2001-333039P P 20011119
OTHER SOURCE(S): CASREACT 139:6672; MARPAT 139:6672
AB (R)-1-(3,5-bis(trifluoromethyl)phenyl)ethan-1-ol and esters thereof were obtained via dynamic kinetic **resoln.** These compds. are useful as intermediates in the synthesis of compds. which possess pharmacol. activity. Thus, 1,3-(F3C)2C6H4 was brominated and the resulting 3,5-(F3C)3C6H3Br subjected to Grignard reaction with Ac2O to give 3,5-(F3C)3C6H3COME or with MeCHO to give 3,5-(F3C)3C6H3CHMeOH. 3,5-(F3C)3C6H3COME was subjected to transfer hydrogenation in presence of [RuCl2(p-cymene)]2 and (R,S)-H2NCMePhCONH2 to give (R,S)-3,5-(F3C)3C6H3CHMeOH which was subjected to kinetic **resoln.** with CH2:CMEOAc in presence of Novozym435 to give (R)-3,5-(F3C)3C6H3CHMeOAc with 99% ee.
IT 9001-62-1, Novozym435 12321-08-3 37362-03-1
37366-09-9, Benzeneruthenium dichloride dimer 37375-79-4
52462-29-0, p-Cymeneruthenium dichloride dimer 52462-30-3
52462-31-4 67421-02-7 88946-78-5
88946-79-6 88946-80-9 104439-77-2
123265-36-1
RU: Cat (Catalyst use); USES (Uses)
(process for the synthesis of (R)-1-(3,5-bis(trifluoromethyl)phenyl)eth

an-1-ol and esters thereof by dynamic kinetic **resoln.**)
RN 9001-62-1 CAPLUS
CN lipase, triacylglycerol (9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 12321-08-3 CAPLUS
CN Ruthenium, tricarbonyl[(2,3,4,5-eta.)-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-one]- (9CI) (CA INDEX NAME)



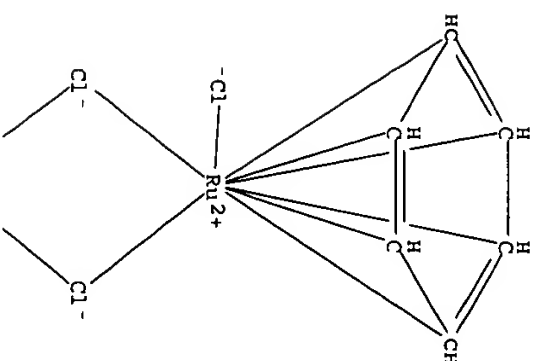
RN 37362-03-1 CAPLUS
CN Ruthenium, bis(eta-6-benzene)di-mu-bromodibromodi- (9CI) (CA INDEX NAME)



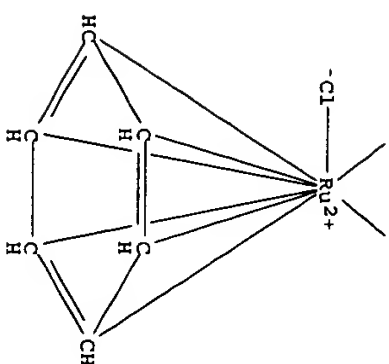


PAGE 2-A

RN 37366-09-9 CAPLUS
 CN Ruthenium, bis(.eta.6-benzene)di-.mu.-chlorodichlorodi- (9CI) (CA INDEX NAME)

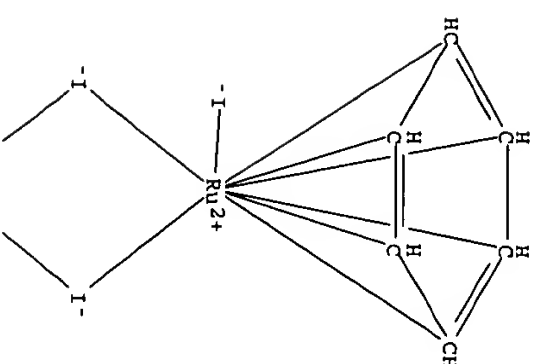


PAGE 1-A

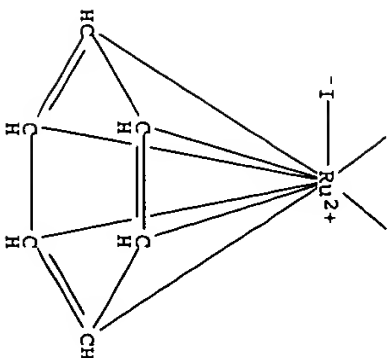


PAGE 2-A

RN 37375-79-4 CAPLUS
 CN Ruthenium, bis(.eta.6-benzene)di-.mu.-iododiodi- (9CI) (CA INDEX NAME)

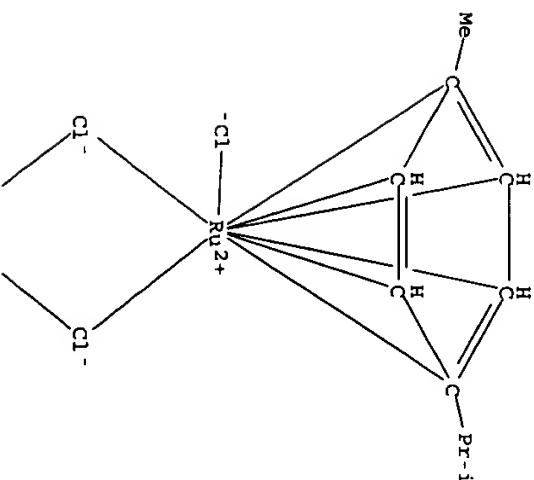


PAGE 1-A

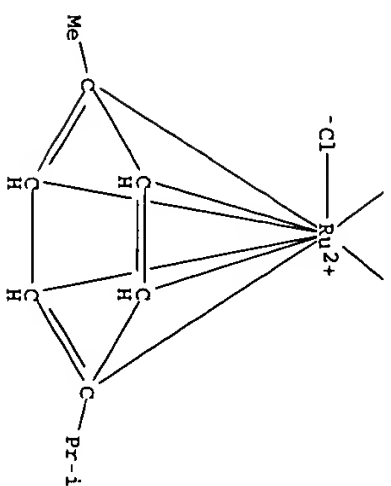


PAGE 2-A

RN 52462-29-0 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

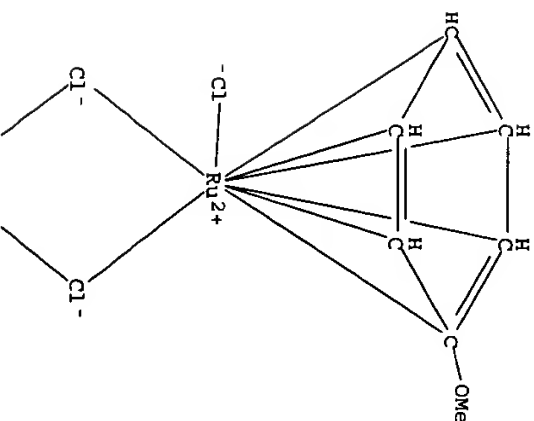


PAGE 1-A

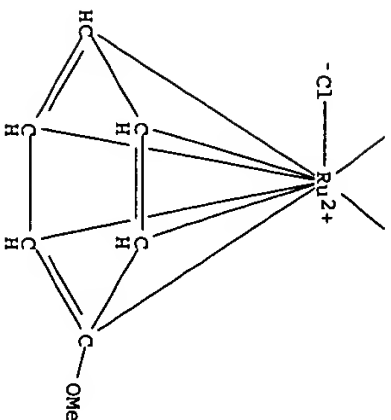


PAGE 2-A

RN 52462-30-3 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-methoxybenzene]di- (9CI) (CA INDEX NAME)



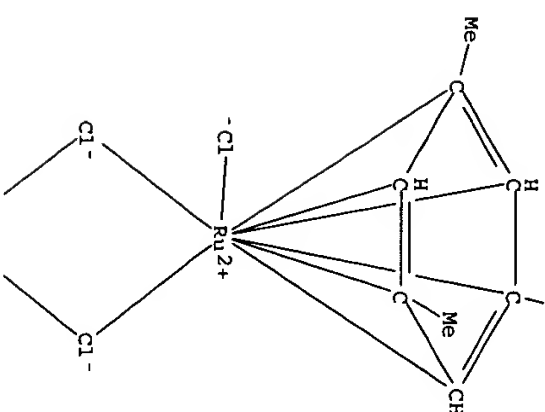
PAGE 1-A



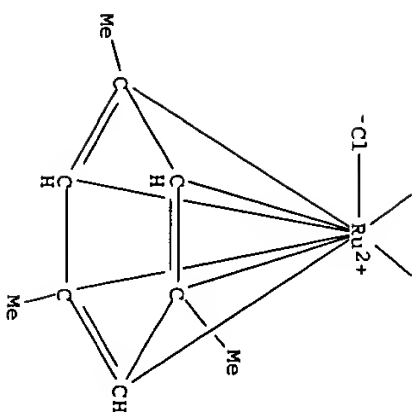
PAGE 2-A

RN 52462-31-4 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1,3,5-trimethylbenzene]di- (9CI) (CA INDEX NAME)

PAGE 1-A

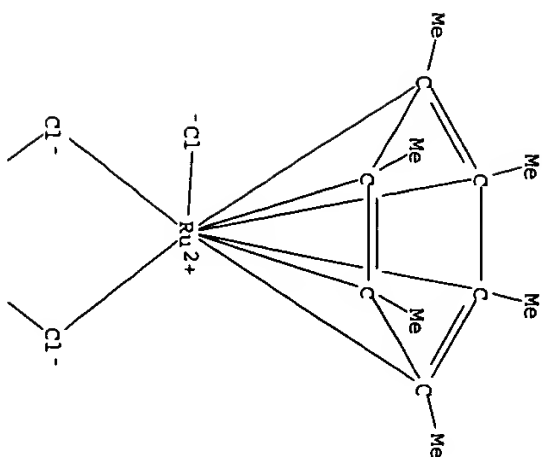


PAGE 2-A



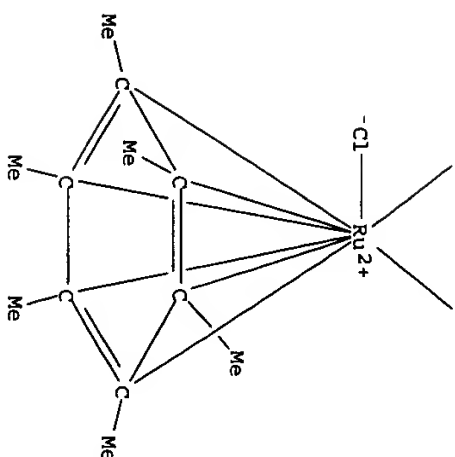
PAGE 3-A

RN 67421-02-7 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-hexamethylbenzene]di- (9CI) (CA INDEX NAME)

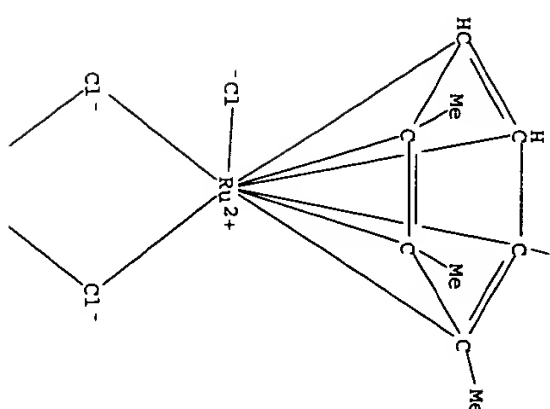


PAGE 1-A

Me



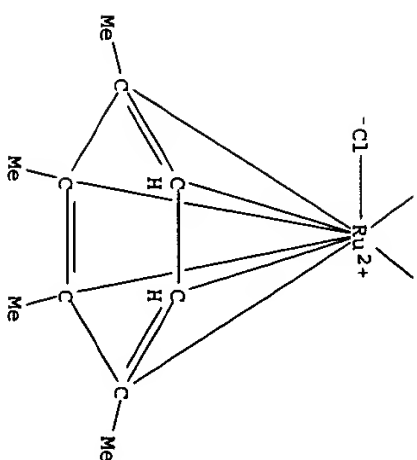
PAGE 2-A



PAGE 2-A

RN 88946-78-5 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1,2,3,4-tetramethylbenzene]di- (9CI) (CA INDEX NAME)

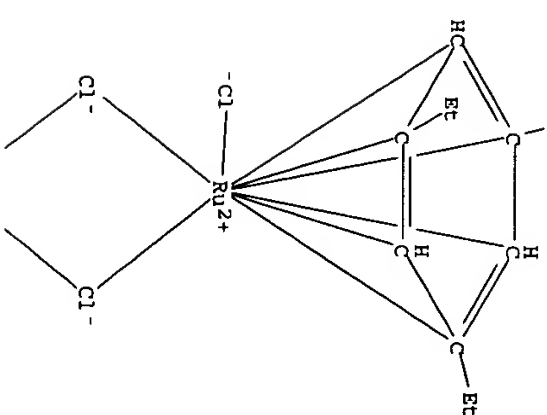
PAGE 3-A



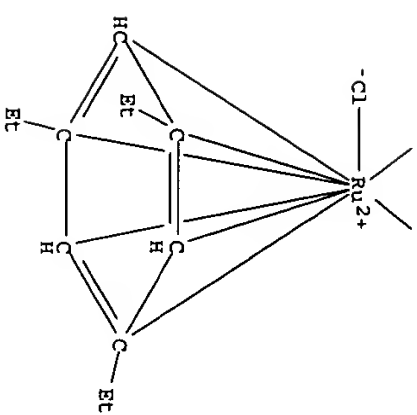
RN 88946-79-6 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1,3,5-triethylbenzene]di- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A



PAGE 3-A

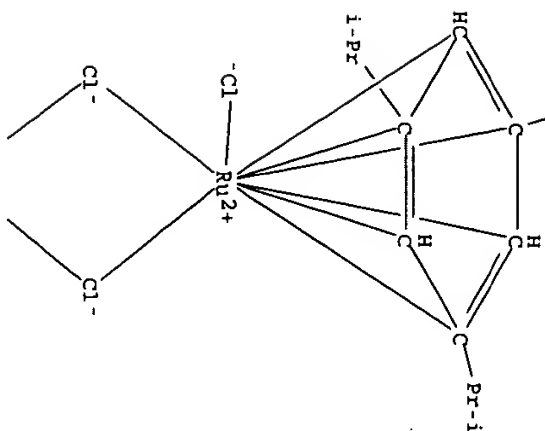


RN 88946-80-9 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1,3,5-tris(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

Et

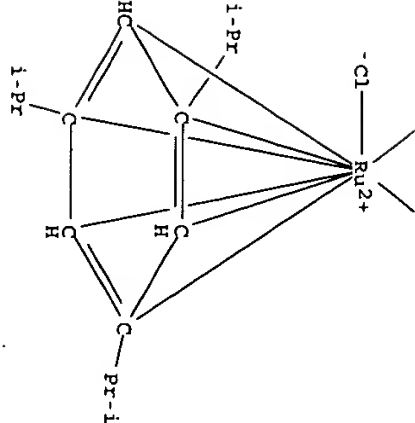
PAGE 1-A

i-Pr

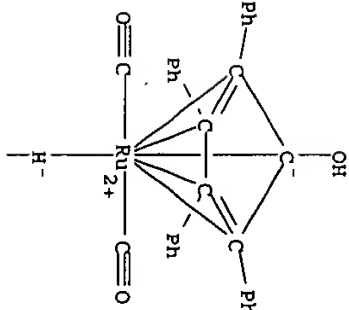


PAGE 2-A

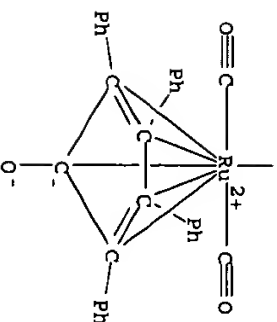
PAGE 3-A



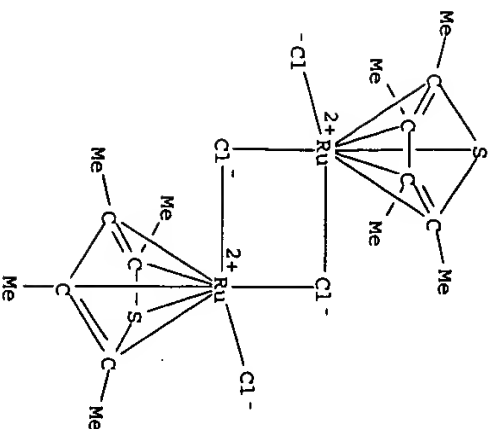
RN 104439-77-2 CAPLUS
CN Ruthenium, tetracarbonyl- μ -hydro[(1,2,3,4,5- η)-1-hydroxylato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl][(1,2,3,4,5- η)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di-(9Cl) (CA INDEX NAME)



PAGE 1-A



RN 123265-36-1 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(2,3,4,5-.eta.)-tetramethylthiophene-.kappa.S]di-, stereoisomer (9CI) (CA INDEX NAME)



L5 ANSWER 2 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:273130 CAPLUS
 DOCUMENT NUMBER: 139:214151
 TITLE: Asymmetric hydrogenation of an .alpha.-.beta.-unsaturated ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolution: a consecutive approach

AUTHOR(S): Lindner, Ekkehard; Ghanem, Ashraf; Warad, Ismail; Eichele, Klaus; Mayer, Hermann A.; Schurig, Volker
 CORPORATE SOURCE: Institute of Inorganic Chemistry, University of Tübingen, Tübingen, 72076, Germany

SOURCE: Tetrahedron: Asymmetry (2003), 14(8), 1045-1053
 CODEN: TASYE3; ISSN: 0957-4166

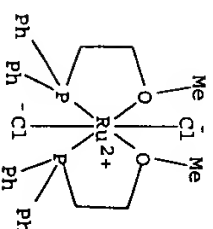
PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The RuCl₂(.eta.1-Ph₂PCCH₂CH₂OCH₃)₂(diamine) complexes have been prepd. in high yields from the reaction of equimolar amts. of RuCl₂(.eta.2-Ph₂PCCH₂CH₂OCH₃)₂ with various kinds of chelating diamines to form five-membered chelates with ruthenium. These novel ruthenium(II)

complexes have been used as catalysts in the asym. hydrogenation of the prochiral ketone trans-4-phenyl-3-buten-2-one (I), using 2-propanol and different types of cocatalysts. Whereas complexes with achiral diamines afforded the **racemic** alcs., complexes with chiral diamines (R,R or S,S) allowed the formation of the corresponding enantiomerically enriched secondary alc. (S or R) with ee values of 45%. In order to obtain the secondary alc. with ee of >99%, the kinetic **resoln.** of enantiomerically enriched I was performed in a consecutive approach using either the lipase-catalyzed enantioselective transesterification of the alc. with isopropenyl acetate as the acyl donor in toluene or the enantioselective hydrolysis of the corresponding acetate in buffer. The detn. of the enantiomeric excess (ee) of the resulting enantiomerically enriched secondary alcs. was performed by gas chromatog. using heptakis(2,3-di-O-methyl-6-O-tert-butylidimethylsilyl)-.beta.-cyclodextrin as the chiral stationary phase.

IT 9001-62-1, Lipase
 RU: CAT (Catalyst use); USES (Uses)
 (asym. hydrogenation of an .alpha.-.beta.-unsatd. ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resoln.)
 RN 9001-62-1 CAPLUS
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 109011-62-3

RU: RCT (Reactant); RACT (Reactant or reagent)
 (asym. hydrogenation of an .alpha.-.beta.-unsatd. ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resoln.)
 RN 109011-62-3 CAPLUS
 CN Ruthenium, dichlorobis[(2-(methoxy-.kappa.O)ethyl]diphenylphosphine-.kappa.P]-, (OC-6-13) - (9CI) (CA INDEX NAME)



REFERENCE COUNT: 30

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L5 ANSWER 3 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:120380 CAPLUS
 DOCUMENT NUMBER: 138:283203
 TITLE: On the Mechanism of the Unexpected Facile Formation of meso-Diacetate Products in Enzymatic Acetylation of Alkanediols

AUTHOR(S): Edlin, Michaela; Baeckvall, Jan-E.
 CORPORATE SOURCE: Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, SE-106 91, Swed.

SOURCE: Journal of Organic Chemistry (2003), 68(6), 2216-2222
 CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 CASREACT 138:283203
 AB The mechanism of the unexpected facile formation of meso-diacetate previously obsd. in the enzymic **resoln.** of DL/meso mixts. of

2,4-pentanediol and 2,5-hexanediol with Candida antarctica lipase B has been elucidated. It was found that the formation of meso-diacetate proceeds via different mechanisms for the two diols. Enzyme-catalyzed acylation of Aco-d3 labeled (R)-monoacetates of meso-2,4-pentanediol and meso-2,5-hexanediol and anal. of the meso-diacetates obtained show that the former reaction proceeds via intramol. acyl migration while the latter occurs via direct S-acylation of the alc. For the (R)-monoacetate of (R,S)-2,4-pentanediol the intramol. acyl migration was fast and therefore direct S-acylation by the external acyl donor is suppressed. For the hexanediol monoacetate the rate ratio (pseudo E value) between (5R,2R)- and (5R,2S)-5-acetoxy-2-hexanol was exptl. detd. to be k_R/k_{R,S} = 25, which is about 10-20 times lower than the E value for 2-pentanol and 2-octanol. In a preliminary expt. it was demonstrated that facile acyl migration in the 1,3-diol deriv. can be utilized to prep. syn-1,3-diacetoxynonane (>90% syn) in high enantioselectivity (>99% ee) via a chemoenzymic dynamic kinetic asym. transformation of a meso/DL mixt. of 1,3-nonanediol.

IT 104439-77-2

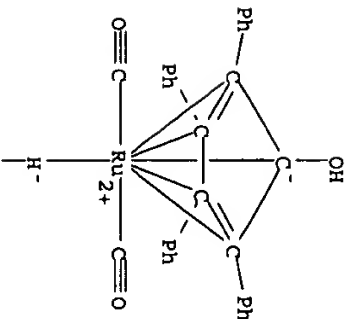
RL: RCT (Reactant); RACT (Reactant or reagent)

(Candida antarctica lipase can form anti-Kazlauskas acetylation products of 2,4-pentanediol and 2,5-hexanediol)

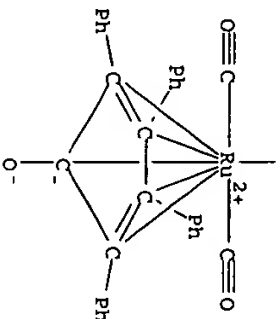
RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



IT 9001-62-1

RL: CAT (Catalyst use); USES (Uses)

(Lipase B; Candida antarctica lipase can form anti-Kazlauskas acetylation products of 2,4-pentanediol and 2,5-hexanediol)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 23 CAPLUS COPYRIGHT 2004 ACS ON STN
ACCESSION NUMBER: 2003:76732 CAPLUS
DOCUMENT NUMBER: 138:137021

TITLE: Process for the racemization of secondary

alcohols using ruthenium compounds and chelating agents

Rietmeier, Thomas; Gross, Peter; Hoff, Manfred;

Monsees, Axel; Dingerdissen, Uwe

Degussa AG, Germany

PCT Int. Appl., 22 pp.

CODEN: PIXXD2

Patent

English

DOCUMENT TYPE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003008361	A1	20030130	WO 2002-EP7743	20020711
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

DE 10133783 A1 20030206 DE 2001-10133783 20010716
PRIORITY APPLN. INFO.: MARPAT 138:137021
OTHER SOURCE(S):

AB A process for the racemization of secondary alcs. uses a mixt. of Ru precursor with .gtoreq.1 chelating N-donor ligands or a complex comprising Ru and .gtoreq.1 chelating N-donor ligand. Thus, (+)-1-phenylethanol, N,N',N'-tetramethyl-1,3-propanediamine, and di-.mu.-chlorobis[(p-cymene)chlororuthenium(II)] were heated in PhMe at

80.degree. in a Schlenk tube for 5 h to give a product having 1% enantiomeric excess. The process was also carried out simultaneously with a kinetic enzymic resolu.

IT 9001-62-1, Chirazyme L-2

RL: CAT (Catalyst use); USES (Uses)
(dynamic kinetic resolu. of secondary alcs. using ruthenium compds. and chelating agents)

RN 9001-62-1 CAPLUS

CN lipase, triacylglycerol (9CI) (CA INDEX NAME)

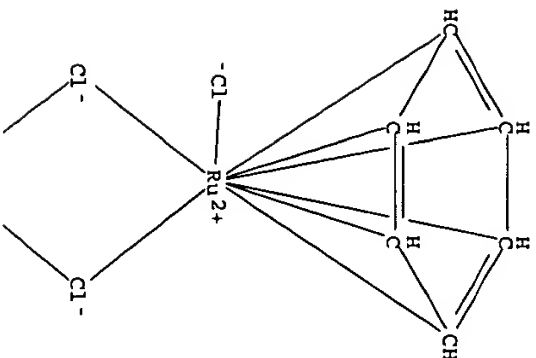
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 37366-09-9, Benzeneruthenium(II) chloride dimer 52462-29-0 134524-84-8

RL: CAT (Catalyst use); USES (Uses)
(process for the racemization of secondary alcs. using ruthenium compds. and chelating agents)

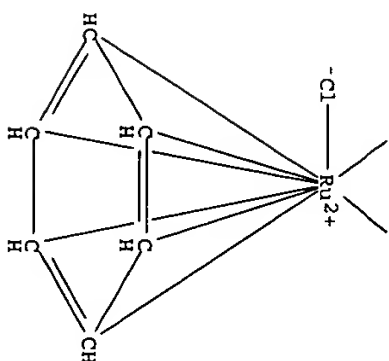
RN 37366-09-9 CAPLUS

CN Ruthenium, bis(.eta.6-benzene)di-.mu.-chlorodichlorodi- (9CI) (CA INDEX NAME)

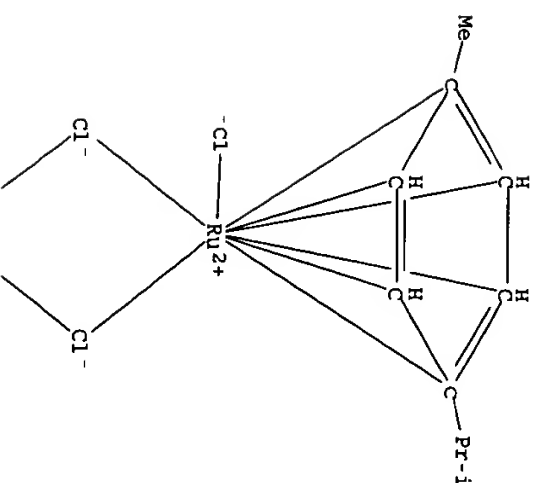


PAGE 1-A

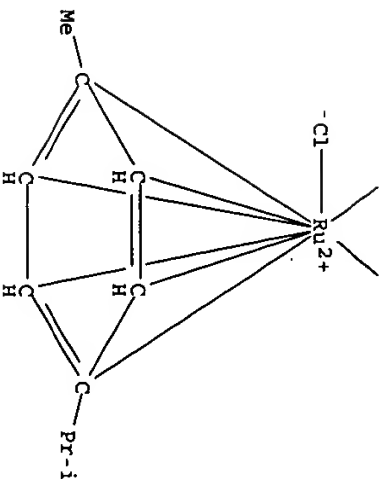
PAGE 2-A



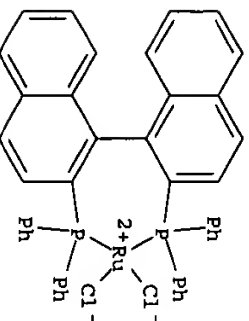
RN 52462-29-0 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



PAGE 1-A



RN 134524-84-8 CAPLUS
CN Ruthenium, [[1,1'-binaphthalene]-2,2'-diyl]bis(diphenylphosphine-
kappa.P)]dichloro-, [SP-4-2-(S)]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:880431 CAPLUS
DOCUMENT NUMBER: 138:106546

TITLE: Chemoenzymatic Dynamic Kinetic Resolution of

.beta.-Halo Alcohols. An Efficient Route to Chiral

Epoxides

Pamies, Oscar; Baeckvall, Jan-E.

Department of Organic Chemistry, Arrhenius Laboratory,

Stockholm University, Stockholm, SE-10691, Swed.

Journal of Organic Chemistry (2002), 67(25), 9006-9010

CODEN: JOCEAH; ISSN: 0022-3263

AMERICAN CHEMICAL SOCIETY

Journal

English

CASREACT 138:106546

AB Enzymic resolution of .beta.-chloro alcs. in combination with

ruthenium-catalyzed alc. isomerization led to a successful dynamic kinetic

resoln. (conversion up to 99% and ee up to 97%). The efficiency

of the DKR is dramatically reduced when .beta.-bromo alcs. are used. The

presence of the bromo substituent causes decompn. of the ruthenium

catalysts, which triggers the progressive deactivation of the enzyme. The

synthetic utility of this procedure has been illustrated by the practical

synthesis of different chiral epoxides.

IT

9001-62-1, Lipase

RL: CAT (Catalyst use); USES (Uses)

(pseudomonas sp.; chemoenzymic dynamic kinetic resoln. of

.beta.-halo alcs. and subsequent conversion of intermediate acetates to

chiral epoxides)

RN 9001-62-1 CAPLUS

lipase, triacylglycerol (9CI) (CA INDEX NAME)

STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT

104439-77-2

RL: CAT (Catalyst use); USES (Uses)

(racemization catalyst; chemoenzymic dynamic kinetic

resoln. of .beta.-halo alcs. and subsequent conversion of

intermediate acetates to chiral epoxides)

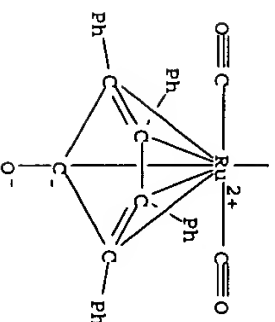
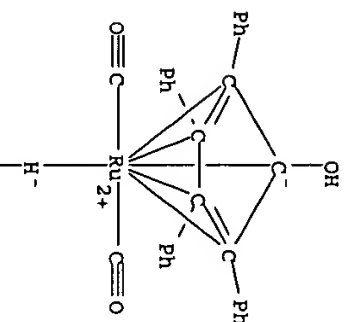
RN

104439-77-2 CAPLUS

Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-

2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-

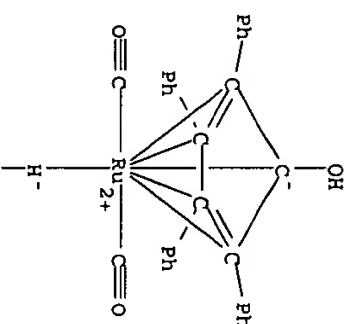
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



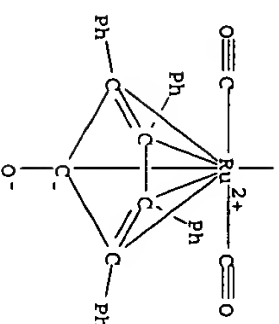
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

PAGE 1-A

L5 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:858574 CAPLUS
DOCUMENT NUMBER: 138:271003
TITLE: Efficient lipase-catalyzed kinetic resolution
and dynamic kinetic resolution of
.beta.-hydroxy nitriles. Correction of absolute
configuration and transformation to chiral
.beta.-hydroxy acids and gamma.-amino alcohols
Pamies, Oscar; Backvall, Jan-E.
Department of Organic Chemistry, Arrhenius Laboratory,
Stockholm University, Stockholm, 106 91, Swed.
Advanced Synthesis & Catalysis (2002), 344(9), 947-952
CODEN: ASCAF7; ISSN: 1615-4150
Wiley-VCH Verlag GmbH & Co. KGaA
PUBLISHER: Journal
DOCUMENT TYPE: English
OTHER SOURCE(S): CASREACT 138:271003
AB Chemoenzymic dynamic kinetic resolu. of .beta.-hydroxy nitriles
has been carried out using Candida antarctica lipase B and a ruthenium
catalyst. The use of a hydrogen source to depress ketone formation in the
dynamic kinetic resolu. yields the acetates in good yield and
high enantioselectivity. It is shown that the ruthenium catalyst and the
enzyme can be recycled when used in sep. reactions. Enantiomerically pure
.beta.-hydroxy acid derivs. and gamma.-amino alcs. were prepd. from the
hydroxy nitriles and acetates. The latter compds. were also used to
establish the correct abs. configuration of the hydroxy nitriles and
acetates.
IT 9001-62-1
RL: CAT (Catalyst use); USES (uses)
(lipase B; lipase-catalyzed kinetic resolu. and dynamic
kinetic resolu. of .beta.-hydroxy nitriles and conversion to
chiral .beta.-hydroxy acids and gamma.-amino alcs.)
RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT 104439-77-2
RL: CAT (Catalyst use); USES (uses)
(lipase-catalyzed kinetic resolu. and dynamic kinetic
resolu. of .beta.-hydroxy nitriles and conversion to chiral
.beta.-hydroxy acids and gamma.-amino alcs.)
RN 104439-77-2 CAPLUS
CN Ruthenium, tetracarbonyl-.mu.-hydro(1,2,3,4,5-.eta.)-1-hydroxyato-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



PAGE 2-A



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:456611 CAPLUS
DOCUMENT NUMBER: 137:384594
TITLE: An efficient and mild ruthenium-catalyzed
racemization of amines: application to the
synthesis of enantiomerically pure amines
Pamies, Oscar; El, Aida H.; Samec, Joseph S. M.;
Hermanns, Nina; Backvall, Jan-E.
Arrhenius Laboratory, Department of Organic Chemistry,
Stockholm University, Stockholm, SE-10691, Swed.
Tetrahedron Letters (2002), 43(26), 4699-4702
CODEN: TETLEA; ISSN: 0040-4039
Elsevier Science Ltd.
PUBLISHER: Journal
DOCUMENT TYPE: English
LANGUAGE: AB An efficient and mild Ru-catalyzed racemization of amines under

transfer hydrogenation conditions is reported. A significant advantage of this new procedure is that the ruthenium hydrogen transfer catalysts allow high functional group tolerance. Interestingly, both primary and secondary amines were efficiently **racemized** under these conditions. We also report on the combination of this new amine **racemization** with an enzymic kinetic **resoln.** of primary amines.

IT 9001-62-1, Lipase 104439-77-2

RL: CAT (Catalyst use); USES (Uses)

(ruthenium-catalyzed **racemization** of amines and subsequent lipase-catalyzed kinetic **resoln.**)

RN 9001-62-1 CAPLUS

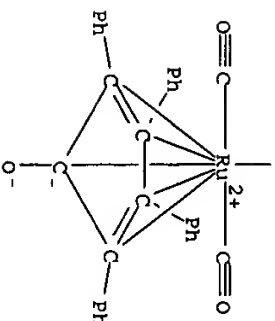
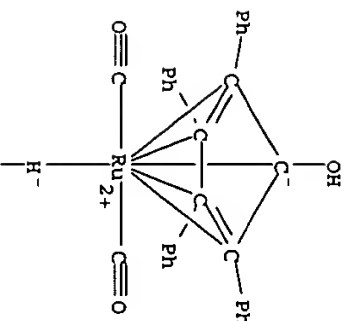
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarboxyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

REFERENCE COUNT:

34

THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 23

CAPLUS COPYRIGHT 2004 ACS ON STN

ACCESSION NUMBER:

2002:403138 CAPLUS

DOCUMENT NUMBER:

137:369562

TITLE:

Efficient ruthenium-catalyzed **racemization** of secondary alcohols: application to dynamic kinetic **resoluition**

AUTHOR(S):

Dijkman, Arne; Elzinga, Geoffrey M.; Li, Yu-Xin; Arends, Isabel W. C. E.; Sheldon, Roger A. Department of Biotechnology, Biocatalysis and Organic Chemistry, Delft University of Technology, Delft, 2628 BL, Neth.

CORPORATE SOURCE:

SOURCE:

Tetrahedron: Asymmetry (2002), 13(8), 879-884

PUBLISHER:

CODEN: TASYE3; ISSN: 0957-4166

DOCUMENT TYPE:

Elsevier Science Ltd.

LANGUAGE:

English

AB

Three new ruthenium-based catalytic systems are described which are capable of catalyzing the **racemization** of chiral secondary alcs. In addn., one of these systems, [TosN(CH₂)₂NH₂]RuCl(P-cymene)/TEMPO, was able to catalyze the in situ **racemization** during enzymic **resoln.**, i.e. dynamic kinetic **resoln.**

IT 9001-62-1, Novozym 435

RL: NUU (Other use, unclassified); USES (Uses)

(additive: effect of additives on **racemization** of secondary alcs. in presence of ruthenium compds./TEMPO catalytic systems)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

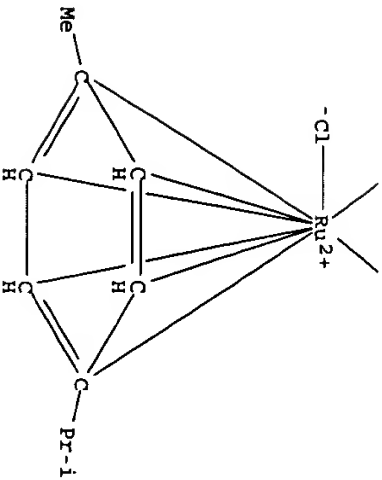
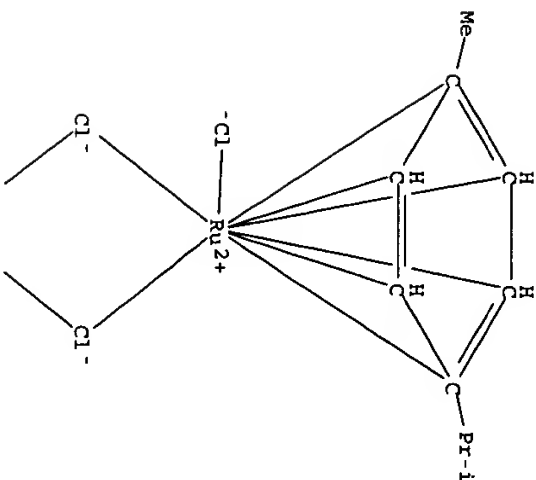
IT 52462-29-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(efficient ruthenium compds./TEMPO catalytic systems for **racemization** of secondary alcs. and potential applications to dynamic kinetic **resoln.**)

RN 52462-29-0 CAPLUS

CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

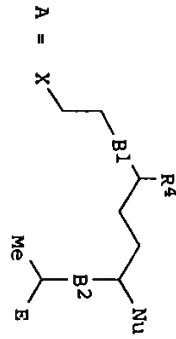


REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:314889 CAPLUS
 DOCUMENT NUMBER: 136:340534
 TITLE: Method for the production of asymmetrically substituted acyloins and derivatives and for the production of epothilones B, D and their derivatives
 INVENTOR(S) : Wessjohann, Ludger A.; Scheid, Guenther; Bornscheuer, Uwe; Henke, Erik; Kuit, Wouter; Orru, Romano
 PATENT ASSIGNEE(S) : Morphochem A.-G., Germany
 SOURCE: PCT Int. Appl., 182 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032844	A2	20020425	WO 2001-EP11992	20011016
WO 2002032844	C1	20030821		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GM, HR, HU, ID, IL, IN, IS, JP, KE, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KY, KZ, MD, RU, TJ, TM, RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, BF, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10051136	A1	20020418	DE 2000-10051136	20001016
DE 10134172	A1	20030123	DE 2001-10134172	20010713
AU 2002021693	A5	20020429	AU 2002-21693	20011016
EP 1358144	A1	20031105	EP 2001-987736	20011016
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRIORITY APPLN. INFO.:			DE 2000-10051136 A	20001016
			DE 2001-10134172 A	20010713
OTHER SOURCE(S):			WO 2001-EP11992 W	20011016
GI			CASREACT 136:340534; MARPAT 136:340534	



AB The invention relates to *racemic* and esp. non-*racemic* acyloins, R1C(:O)CHR2OH [I; R1 = H, alkyl (esp. Me, Et, Pr), aryl, alkylaryl, CH2-aryl, (CH2)2-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, C3-7-cycloalkyl, CHnF3-n, C3-7-oxacycloalkyl; R2 = alkyl, aryl, alkylaryl, CH2-aryl, (CH2)2-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, E- or Z-haloalkenyl, 3,3-dihaloalkyl, C3-7-cycloalkyl, CHnF3-n, C3-7-oxacycloalkyl, alkylpropynyl, 1-alkylallyl, 3,3-dialkylallyl, A (joined at X); B1, B2 = single or E-, Z-, E/Z-double bond; B1 = epoxide; R4 = H, F, Cl, Br, I, alkyl (esp. Me, Et, CHnF3-n), aryl, alkylaryl, CH2-aryl, (CH2)2-aryl, vinyl, alkynyl, propynyl, allyl, 3,3-dialkylallyl, C3-7-cycloalkyl, CHnF3-n, C3-7-oxacycloalkyl; E = Me, CH2OH, CH2O-PG, CHO, CO2R, CO2-PG, CH2-halo, CONR2, CON(PG)2, CON(OMe)Me, CN; R = alkyl; Nu = R4, O-PG, OR, N(PG)2, N(alkyl)2, S-PG, S-alkyl, Se-PG, Se-alkyl, CN, N3, aryl, heteroaryl; PG = protective group), their derivs., a method for the prodn. thereof and the use of the same for producing epothilones and their derivs. The invention esp. relates to the prodn. of acyloins in a non-*racemic* form by means of diastereomer sepn. or synthesis using auxiliary agents and by means of enzymic *resoln.* of racemates. The invention also relates to epothilone synthesis components, a method for the prodn. thereof and the use of synthesis components for producing epothilones and

their derivs. Thus, optically active (2)-3-hydroxy-6,10-dimethyl-11-
[(tert-butylidimethylsilyl)oxy]undeca-5,9-dien-2-one was prepd. from
(+)-)- (Z)-3-acetoxy-6,10-dimethyl-11-[(tert-butylidimethylsilyl)oxy]undeca-
5,9-dien-2-one via enzymic resolu. with Chirazyme L6. The
optically active hydroxy ketone was converted to three
3-O-(tert-butylidimethylsilyl)epothilone D stereoisomers.
IT 9001-62-1, lipase 9016-18-6, Esterase
104621-48-9

RU: CAT (Catalyst use); USES (Uses)
(prepn. of asym. substituted acylolins and derivs. for the of epothilone
B, D and their derivs.)
RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 9016-18-6 CAPLUS
CN Esterase, carboxyl (8CI, 9CI) (CA INDEX NAME)

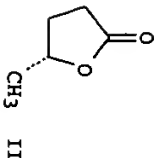
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 104621-48-9 CAPLUS
CN Ruthenium, bis(acetato-.kappa.O,.kappa.O')[(1R)-[1,1'-binaphthalene]-2,2'-
diyl]bis[diphenylphosphine-.kappa.P]}-, (OC-6-22-.DELTA.)- (9CI) (CA INDEX
NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L5 ANSWER 10 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:255775 CAPLUS
DOCUMENT NUMBER: 137:278899
TITLE: Dynamic kinetic resolution of

AUTHOR(S) : .gamma.-hydroxy acid derivatives
Runmo, Ann-Britt L.; Pamies, Oscar; Faber, Kurt;
Backvall, Jan-E.
CORPORATE SOURCE: Arrhenius Laboratory, Department of Organic Chemistry,
Stockholm University, Stockholm, SE-10691, Swed.
Tetrahedron Letters (2002), 43(16), 2983-2986

SOURCE: CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S) : CASREACT 137:278899
GI



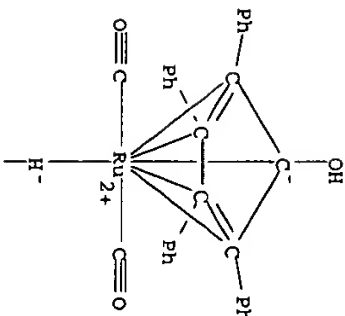
AB .gamma.-Hydroxy acid derivs. MeCH(OR)CH2CH2COR1 [R = H; R1 = Me3CO,
(Me2CH)2N] (I) undergo enzymic kinetic resolu. with
4-chlorophenyl acetate in toluene in the presence of Pseudomonas cepacia
lipase to give nonracemic I (R = Ac) in 44-56% yields and in 77-99% ee.
When the enzymic resolu. is performed under anaerobic conditions
' in the presence of a bis(hydroxycyclopentadienyl)diruthenium tetracarbonyl
hydride racemization catalyst and in the presence of
2,4-dimethyl-3-pentanol as a hydride donor, nonracemic I (R = Ac) is
isolated in 43-93% yields and in 71-98% ee from the dynamic kinetic
resolu. MeCH(OAc)CH2CH2CON(CMe2)2, prepd. in 93% yield and 98%
ee from the dynamic kinetic resolu. of I [R = H; R1 =

(Me2CH)2N), undergoes hydrolysis with lithium hydroxide in methanol
followed by acidic lactonization to give the nonracemic .gamma.-lactone II
in 92% ee.

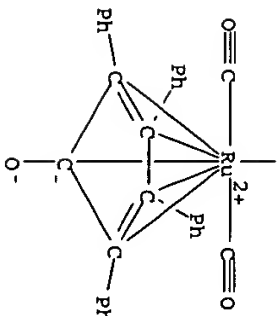
IT 9001-62-1, Lipase 104439-77-2
RU: CAT (Catalyst use); USES (Uses)
(enantioselective prepn. of .gamma.-hydroxy acid derivs. by either
kinetic or dynamic kinetic resolu. of .gamma.-hydroxy acid
derivs. with Pseudomonas cepacia lipase in absence or presence of
ruthenium racemization catalyst)
RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 104439-77-2 CAPLUS
CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-eta.)-1-hydroxylato-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl][(1,2,3,4,5-eta.)-1-hydroxy-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

PAGE 1-A



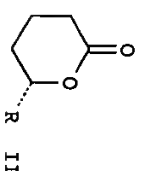
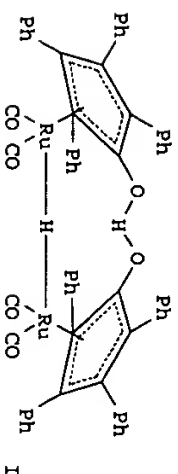
PAGE 2-A



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2002:64783 CAPLUS
 DOCUMENT NUMBER: 136:263059
 TITLE: Enzymatic kinetic resolution and chemoenzymatic dynamic kinetic resolution of .delta.-hydroxy esters. An efficient route to chiral .delta.-lactones
 AUTHOR(S) : Pamies, Oscar; Baeckvall, Jan-E.
 CORPORATE SOURCE: Arrhenius Laboratory, Department of Organic Chemistry, Stockholm University, Stockholm, SE-106 91, Swed.
 SOURCE: Journal of Organic Chemistry (2002), 67(4), 1261-1265
 CODEN: JOCEAH; ISSN: 0022-3263
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S) : CASREACT 136:263059
 GI

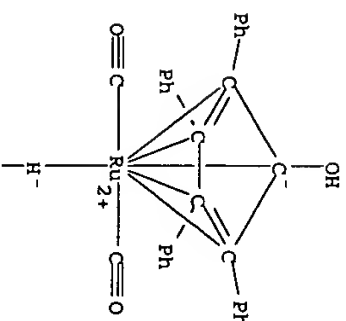


AB Racemic .delta.-hydroxy esters RCH(OH)CH₂CH₂CH₂CO₂CMe₃ (R = Me, Et) underwent kinetic resolu. by lipase-catalyzed transesterification with 4-chlorophenyl acetate in toluene to give nonracemic .delta.-acetoxy esters (R)-RCH(OAc)CH₂CH₂CH₂CO₂CMe₃ (R = Me, Et) and the (S)-.delta.-hydroxy esters RCH(OH)CH₂CH₂CH₂CO₂CMe₃ (R = Et) in 98-99% ee (E value up to 360). When the Shvo ruthenium isomerization catalyst I was added to the enzymic acylation conditions, the combination of the enzymic kinetic resolu. with a ruthenium-catalyzed alc. racemization led to an efficient dynamic kinetic resolu. of the .delta.-hydroxy esters to give (R)-RCH(OAc)CH₂CH₂CH₂CO₂CMe₃ in 87-89% yields and in ee up to 99%. The .delta.-hydroxy esters were converted to .delta.-lactones II, important building blocks in the synthesis of natural products and biol. active compds., by deacetylation with lithium hydroxide in toluene/methanol followed by acidification with hydrochloric acid. (S)-5-(tert-butylidimethylsiloxy)heptanal (S)-EtCH(OTBDMS)CH₂CH₂CHO (TBDMS = tert-butylidimethylsilyl), a key intermediate in the synthesis of widely used com. insecticide Spinosyn A, was prepd. from (S)-EtCH(OH)CH₂CH₂CH₂CO₂CMe₃ by silylation of the secondary alc. followed by redn. of the ester with diisobutylaluminum hydride.

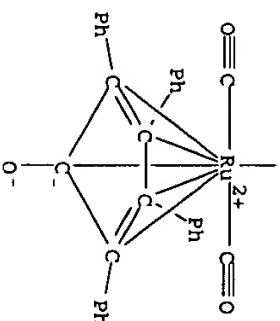
IT 9001-62-1, Lipase
 RL: CAT (Catalyst use); USES (Uses)
 (Pseudomonas cepacia; enantioselective prepn. of .delta.-lactones by dynamic kinetic resolu. of .delta.-hydroxy esters by acylation with 4-chlorophenyl acetate in presence of lipase and ruthenium isomerization catalyst)
 RN 9001-62-1 CAPLUS
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
 *** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 104439-77-2
 RL: CAT (Catalyst use); USES (Uses)
 (enantioselective prepn. of .delta.-lactones by dynamic kinetic

resolu. of .delta.-hydroxy esters by acylation with 4-chlorophenyl acetate in presence of lipase and ruthenium isomerization catalyst)
 RN 104439-77-2 CAPLUS
 CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxyato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl][(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

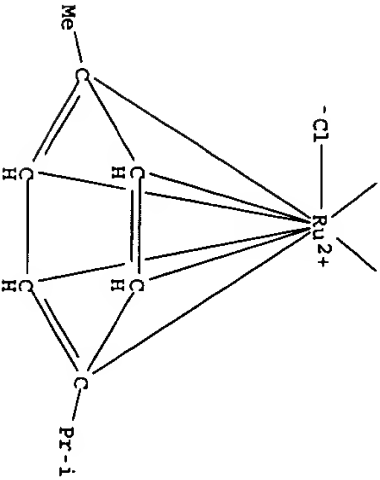
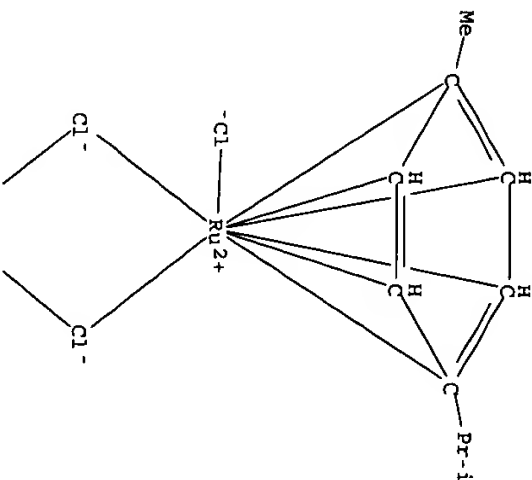


REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
 L5 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:868714 CAPLUS
 DOCUMENT NUMBER: 136:4770
 TITLE: Process for the preparation of enantiomerically enriched esters and alcohols
 INVENTOR(S) : Gerardus, Broxterman, Quirinus Bernardus
 PATENT ASSIGNEE(S) : DSM N.V., Neth.

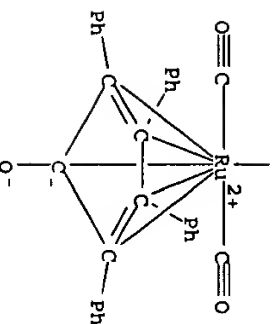
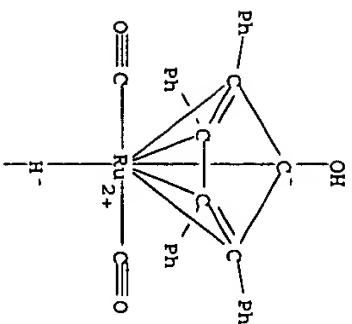
SOURCE: PCT Int. Appl., 43 pp.
DOCUMENT TYPE: CODEN: PIXXD2
LANGUAGE: Patent
FAMILY ACC. NUM. COUNT: 1 English
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001090396	A1	20011129	WO 2001-NL383	20010521
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
NL 1015313	C2	20011127	NL 2000-1015313	20000526
EP 1283898	A1	20030219	EP 2001-932412	20010521
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003533993	T2	20031118	JP 2001-586591	20010521
PRIORITY APPLN. INFO.:			NL 2000-1015313	A 20000526
			WO 2001-NL383	W 20010521

OTHER SOURCE(S): CASREACT 136:4770; MARPAT 136:4770
AB Method for the prepn. of an enantiomerically enriched ester, in which a mixt. of the enantiomers of the corresponding secondary alc. is subjected, in the presence of an acyl donor, to an enantioselective conversion in the presence of a racemization catalyst upon which the ester is formed and an acyl donor residue is obtained, and in which the acyl donor residue is irreversibly removed from the phase in which the enantioselective conversion takes place. Preferably the enantioselective catalyst is used as racemization catalyst. The secondary alc. can be formed in situ from the corresponding ketone, in the presence of a H donor. It is also possible to use a mixt. of the secondary alc. and the corresponding ketone as substrate. Preferably the acyl donor is chosen so that the acyl donor residue is converted in situ into another compd. and/or the acyl donor residue is removed via distn. under reduced pressure. The enantiomerically enriched esters obtained can subsequently be converted into the corresponding enantiomerically enriched alcs., which are desirable intermediate products in the prepn. of liq. crystals, agro chems. or pharmaceuticals.
IT 9001-62-1, Novozyme 435 52462-29-0 104439-77-2
RU: CAT (Catalyst use); USES (Uses)
CN (prepn. of enantiomerically enriched esters and alcs.)
RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 52462-29-0 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



RN 104439-77-2 CAPLUS
CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl[(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



AB An efficient kinetic **resoln.** of **racemic** .beta.-hydroxy nitriles was performed via *Candida antarctica* lipase (N-435)-catalyzed transesterification. A variety of **racemic** alkyl, aryl, and aryloxyethyl substituted .beta.-hydroxy nitriles was efficiently transformed to the corresponding enantiomerically pure acetates (ee >99% and conversion = 50%) with E values from 40 to >1000. The combination of the enzymic kinetic **resoln.** with a ruthenium-catalyzed alc. **racemization** led to a dynamic kinetic **resoln.** (ee's up to 99%, yields up to 85%).

IT 9001-62-1, Lipase 104439-77-2

RU: CAT (Catalyst use); USES (Uses) (lipase-catalyzed kinetic **resoln.** and dynamic kinetic **resoln.** of .beta.-hydroxy nitriles)

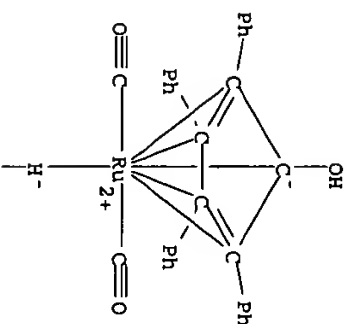
RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

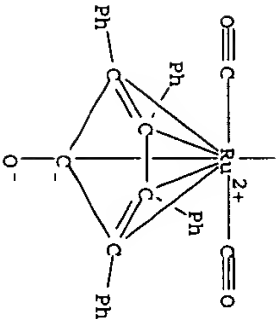
RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

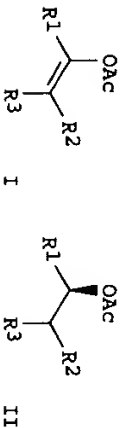
15 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:669911 CAPLUS
 DOCUMENT NUMBER: 136:37080
 TITLE: Efficient lipase-catalyzed kinetic **resolution** and dynamic kinetic **resolution** of .beta.-hydroxy nitriles. A route to useful precursors for .gamma.-amino alcohols
 AUTHOR(S): Pamies, Oscar; Backvall, Jan-E.
 CORPORATE SOURCE: Department of Organic Chemistry, Arrhenius Laboratory, Stockholm University, Stockholm, 106 91, Swed.
 SOURCE: Advanced Synthesis & Catalysis (2001), 343(6+7), 726-731
 CODEN: ASCAF7, ISSN: 1615-4150
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal
 LANGUAGE: English



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:416874 CAPLUS
DOCUMENT NUMBER: 135:19231
TITLE: Stereoselective method for preparing chiral esters from alkenyl esters via ruthenium catalyzed reduction and enzymic resolution
INVENTOR(S) : Hyun Min
PATENT ASSIGNEE(S) : Samsung Fine Chemicals Co., Ltd., S. Korea; Pohang University of Science and Technology
SOURCE : PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001040157	A1	20010607	WO 2000-KR1169	20001018
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, VZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RM: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GM, ML, MR, NE, SN, TD, TG				
EP 1237837	A1	20020911	EP 2000-971838	20001018
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003515336	T2	20030507	JP 2001-541847	20001018
US 2001012898	A1	20010809	US 2000-726412	20001201
US 6475773	B2	20021105		
PRIORITY APPLN. INFO.:				
KR 1999-54472 A 19991202				
WO 2000-KR1169 W 20001018				
OTHER SOURCE(S) : CASREACT 135:19231; MARPAT 135:19231				
GI				



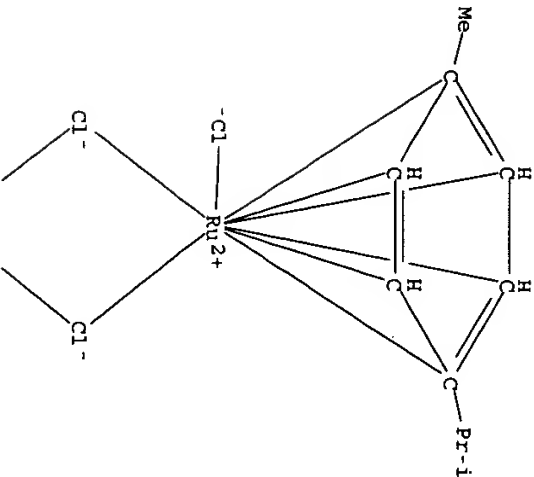
AB A method for prep. optically pure chiral esters I (R1, R2 and R3 = independently (un)substituted alkyl, aryl or cycloalkyl group and R1 and R2, R1 and R3, and R2 and R3 can form a cyclic ring; substituent may be halogen or cyano group) in high yield from alkenyl esters via ruthenium catalyzed redn./racemization with successive enzymic resolu. is disclosed. For example, II was synthesized in 89% yield (98% enantiomeric excess) by mixing 1-phenylethenyl acetate with 2,6-dimethylheptan-4-ol, a ruthenium catalyst, and Novozym 435 followed by heating under Argon with subsequent chromatog. purifn. The chiral esters obtained can be used as synthetic intermediates for prep. various chiral compds., chiral pharmaceutical drugs (e.g. Atorvastatin and Agenerase) or chiral agrochems. (e.g. L-Carnitine).

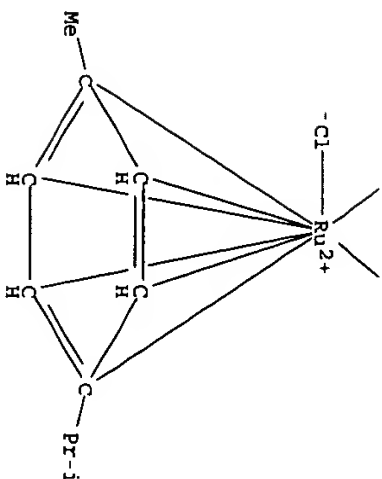
IT 9001-62-1, Novozym 435 52462-29-0 104439-77-2
RL: CAT (Catalyst use); USES (Uses)
(stereoselective method for prep. chiral esters from alkenyl esters via ruthenium catalyzed redn. and enzymic resolu. of racemic alc. intermediate)

RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

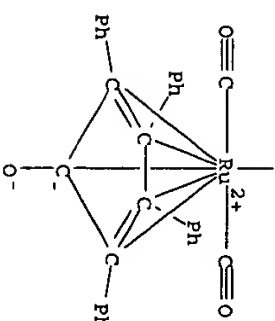
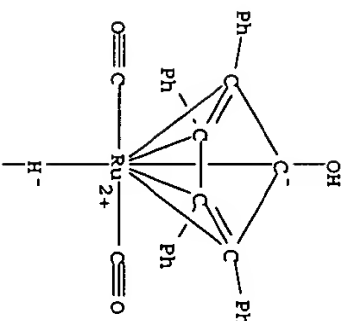
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 52462-29-0 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)





RN 104439-77-2 CAPLUS
 CN Ruthenium, tetracarbonyl-.mu.-hydro(1,2,3,4,5-.eta.)-1-hydroxy-lato-
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] di- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

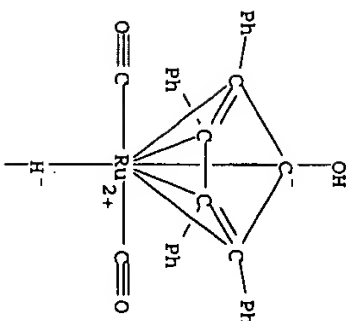
L5 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:412568 CAPLUS
 DOCUMENT NUMBER: 135:152357
 TITLE: Lipase/Ruthenium-Catalyzed Dynamic Kinetic
 Resolution of Hydroxy Acids, Diols, and
 Hydroxy Aldehydes Protected with a Bulky Group
 Kim, Mahn-joo; Choi, Yoon Kyung; Choi, Min Young; Kim,
 Mi Jung; Park, Jaiwook
 National Research Laboratory of Chirotechnology
 Department of Chemistry Division of Molecular and Life
 Sciences, Pohang University of Science and Technology,
 Pohang Kyungbuk, 790-784, S. Korea
 Journal of Organic Chemistry (2001), 66(13), 4736-4738
 CODEN: JOCEAH; ISSN: 0022-3263
 American Chemical Society
 English
 Journal

AUTHOR(S):
 CORPORATE SOURCE:

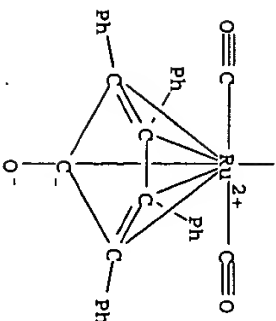
SOURCE:
 PUBLISHER:
 DOCUMENT TYPE:
 LANGUAGE:
 OTHER SOURCE(S):
 AB The racemic title substrates were modified with bulky protecting
 groups and then subjected to the lipase/ruthenium-catalyzed dynamic
 kinetic **resoln.** (DKR). E.g., DKR of MeCH(OH)CH₂CO₂CH₂Ph with
 Pseudomonas cepacia lipase, a Ru catalyst, and 4-ClC₆H₄OAc gave
 (R)-MeCH(OAc)CH₂CO₂CH₂Ph (88% yield, 86 & ee).
 IT 9001-62-1, lipase PSD 104439-77-2
 RL: CAT (Catalyst use); USES (Uses)
 (lipase/ruthenium-catalyzed dynamic kinetic **resoln.** of
 hydroxy acids, diols, and hydroxy aldehydes protected with a bulky
 group)
 RN 9001-62-1 CAPLUS
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 104439-77-2 CAPLUS
 CN Ruthenium, tetracarbonyl-.mu.-hydro(1,2,3,4,5-.eta.)-1-hydroxy-lato-
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-
 2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

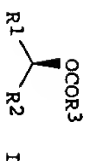


REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

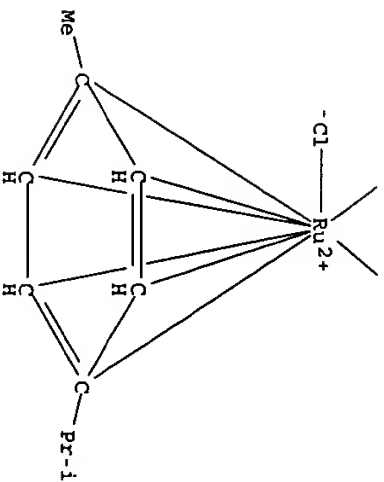
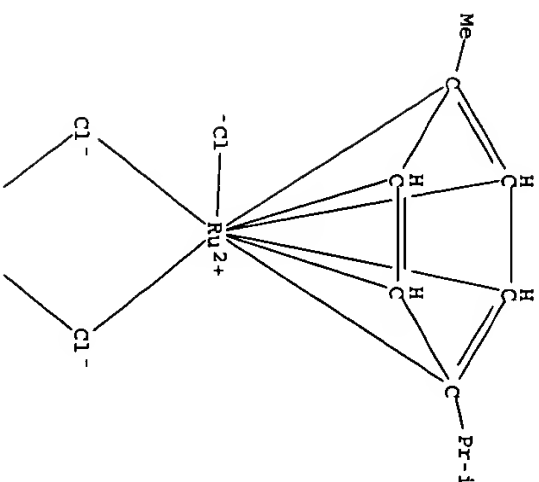
L5 ANSWER 16 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2001:300657 CAPLUS
 DOCUMENT NUMBER: 134:310984
 TITLE: Preparation of chiral esters
 INVENTOR(S) : Park, Jai Wook; Kim, Mahn-foo; Koh, Jeong Hwan; Jung, Hyun Min
 PATENT ASSIGNEE(S) : Samsung Fine Chemicals Co., Ltd., S. Korea; Pohang University of Science and Technology
 SOURCE: PCT Int. Appl., 20 pp.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION: 1

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2001028971 A1 20010426 WO 2000-KR1171 20001018
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, BG, BZ, CA, CH, CN, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 EP 1226105 A1 20020731 EP 2000-971840 20001018
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL
 JP 2003512035 T2 20030402 JP 2001-531776 20001018
 PRIORITY APPLN. INFO.: KR 1999-45041 A 19991018
 WO 2000-KR1171 W 20001018
 OTHER SOURCE(S) : CASREACT 134:310984; MARPAT 134:310984
 GI



AB Title esters [I; R1-R3 = (cyclo)alkyl, aryl, etc.] were prepd. from R1COR2 in the presence of a Ru complex, a lipase, a hydride donor, and an acyl donor wherein unacylated alcohol enantiomer is racemized
 IT 52462-29-0
 RL: CAT (Catalyst use); USES (Uses)
 (prepn. of chiral esters)
 RN 52462-29-0 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



IT 9001-62-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of chiral esters)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 23 CAPLUS COPYRIGHT 2004 ACS ON STN
ACCESSION NUMBER: 2001:192974 CAPLUS
DOCUMENT NUMBER: 134:366391
TITLE: Enantioselective Synthesis of .beta.-Hydroxy Acid

Derivatives via a One-Pot Aldol Reaction-Dynamic
Kinetic Resolution
Huerta, Fernando F.; Baeckvall, Jan-E.
Department of Organic Chemistry Arrhenius Laboratory,
Stockholm University, Stockholm, SE-106 91, Swed.
Organic Letters (2001), 3(8), 1209-1212
CODEN: ORLEF7; ISSN: 1523-7060
American Chemical Society
Journal

PUBLISHER:
DOCUMENT TYPE:
LANGUAGE:
OTHER SOURCE(S):
CASREACT 134:366391
English

AB Combining dynamic kinetic resoln. with an aldol reaction
provides access to .beta.-hydroxy ester derivs. with high enantiomeric
purity (up to 99% ee) in a one-pot procedure. Only simple starting
materials are required in this enantioselective process, and preformation
of a silyl enol ether is not necessary.

IT 9001-62-1, Lipase 104439-77-2

RL: CAT (Catalyst use); USES (Uses)
(enantioselective synthesis of .beta.-hydroxy acid derivs. via a
one-pot aldol reaction-dynamic kinetic resoln.)

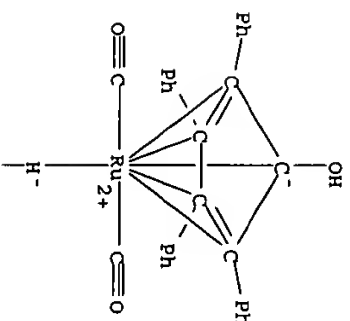
RN 9001-62-1 CAPLUS

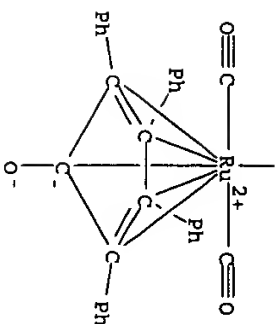
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-.mu.-hydro((1,2,3,4,5-.eta.)-1-hydroxyato-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl) [(1,2,3,4,5-.eta.)-1-hydroxy-
2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)





REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:455856 CAPLUS
DOCUMENT NUMBER: 133:222192

TITLE: Dynamic Kinetic Resolution of Allylic Alcohols Mediated by Ruthenium- and Lipase-Based Catalysts
AUTHOR(S): Lee, Donghyun; Huh, Eun A.; Kim, Mahn-Joo; Jung, Hyun Min; Koh, Jeong Hwan; Park, Jaiwook
CORPORATE SOURCE: Department of Chemistry Division of Molecular and Life Science, Pohang University of Science and Technology, Pohang Kyungbuk, 790-784, S. Korea

SOURCE: Organic Letters (2000), 2(15), 2377-2379
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

CASREACT 133:222192

OTHER SOURCE(S): AB An enzyme-metal combo reaction has been developed for the dynamic kinetic resolution of allylic alcs. in which racemic substrates are transformed by a lipase and a ruthenium complex in the presence of an acyl donor to allylic acetates of high optical purity in over 80% yield.
IT 9001-62-1, Lipase

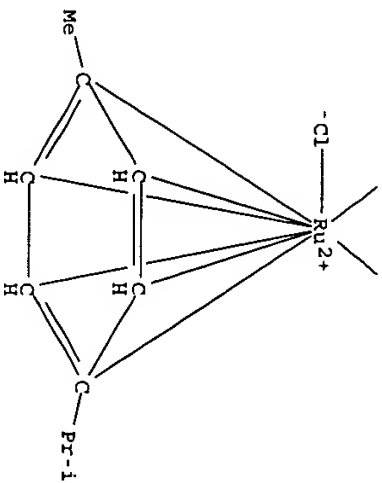
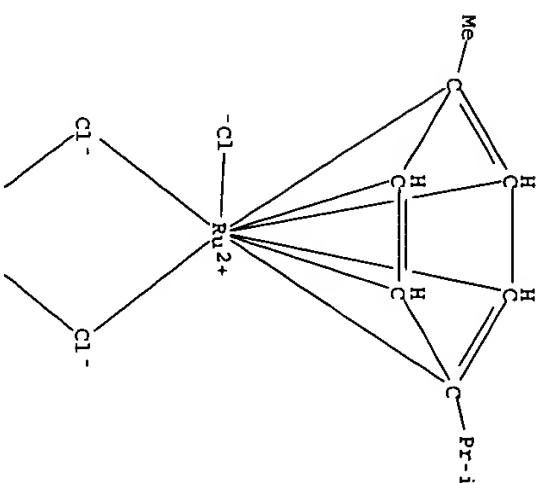
RL: CAT (Catalyst use); USES (Uses)
(catalyst for enantioselective acylation of racemic allylic alcs.; synthesis of homochiral allylic acetates via enantioselective enzymic acetylation of racemic allylic alcs. and Ru-catalyzed racemization of unreacted substrate)

RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

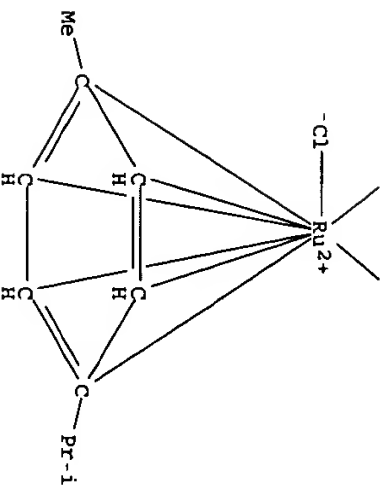
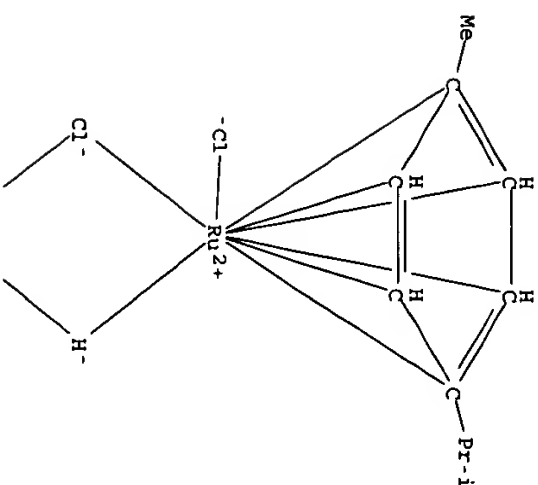
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 52462-29-0, (p-Cymene)ruthenium(II) chloride dimer
90720-60-8, Ruthenium, .mu.-chlorodichloro-.mu.-hydrobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di-
RL: CAT (Catalyst use); USES (Uses)
(racemization catalyst for dynamic kinetic resolution of allylic alcs.; synthesis of homochiral allylic acetates via enantioselective enzymic acetylation of racemic allylic alcs. and Ru-catalyzed racemization of unreacted substrate)

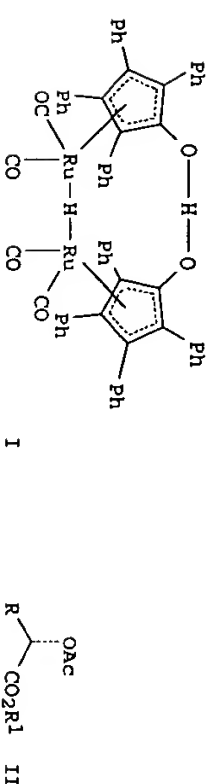
RN 52462-29-0 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



RN 90720-60-8 CAPLUS
CN Ruthenium, .mu.-chlorodichloro-.mu.-hydrobis[(1,2,3,4,5,6-eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)



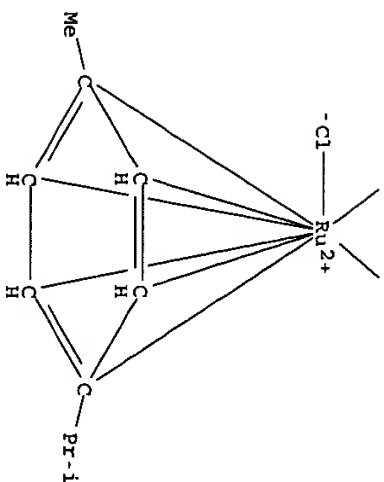
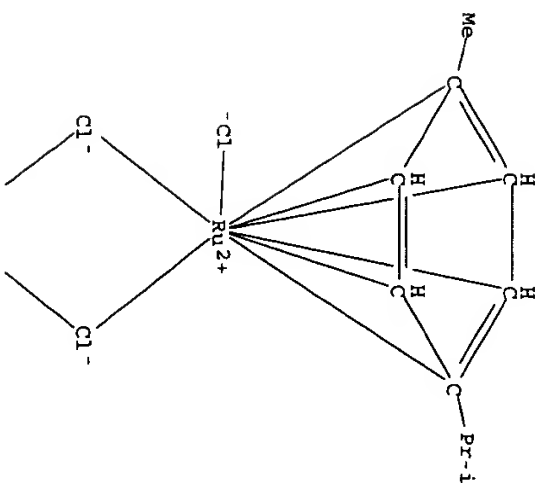
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 132:333983
GI



AB Enzymic **resoln.** of .alpha.-hydroxy esters RCH(OH)CO₂R₁ (R = Bu, Ph, 4-MeOC₆H₄, PhCH₂CH₂, 4-Brc₆H₄, cyclohexyl; R₁ = Me, Et) in combination with ruthenium-catalyzed **racemization** of the dimeric ruthenium catalyst I led to dynamic **resoln.** of the .alpha.-hydroxy esters to give esters II in good yields and excellent ee's. E.g., Me .alpha.-hydroxy-4-methoxyphenylacetate and 4-chlorophenyl acetate were dissolved in cyclohexane; argon was bubbled through the soln. and the soln. was injected by cannula into a Schlenk flask with 2 mol% catalyst I and 30 mg of Pseudomonas cepacia lipase PS-C and heated for 48h and 60.degree. to give acetate II (R = 4-MeOC₆H₄; R₁ = Me) in 76% yield and in 94% ee.

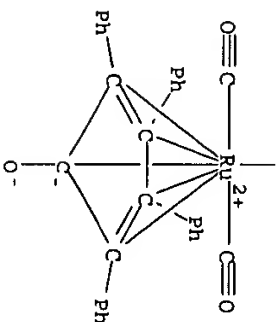
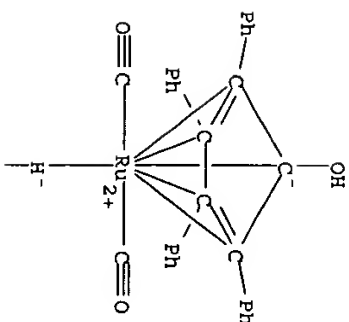
IT 9001-62-1, lipase 52462-29-0
RL: CAT (Catalyst use); USES (uses)
(nonracemic prepn. of .alpha.-hydroxy esters by dynamic **resoln** . in the presence of Pseudomonas cepacia lipase and a diruthenium catalyst)
RN 9001-62-1 CAPLUS
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 52462-29-0 CAPLUS
CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
L5 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:196518 CAPLUS
DOCUMENT NUMBER: 132:333983
TITLE: Dynamic Kinetic Resolution of .alpha.-Hydroxy Acid Esters
AUTHOR(S): Huerta, Fernando F.; Laxmi, Y. R. Santosh; Baekvall, Jan-E.
CORPORATE SOURCE: Department of Organic Chemistry Arrhenius Laboratory, Stockholm University, Stockholm, SE-106 91, Swed.
SOURCE: Organic letters (2000), 2(8), 1037-1040
CODEN: ORLEF7; ISSN: 1523-7060



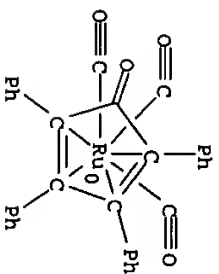
IT 104439-77-2P

RU: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (nonracemic prepn. of .alpha.-hydroxy esters by dynamic resolu . in the presence of Pseudomonas cepacia lipase and a diruthenium catalyst)
 RN 104439-77-2 CAPLUS
 CN Ruthenium, tetracarboxyl-.mu.-hydro[(1,2,3,4,5-.eta.)-1-hydroxy]ato-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



IT 12321-08-3P

RU: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses) (nonracemic prepn. of .alpha.-hydroxy esters by dynamic resolu . in the presence of Pseudomonas cepacia lipase and a diruthenium catalyst)
 RN 12321-08-3 CAPLUS
 CN Ruthenium, tricarboxyl[(2,3,4,5-.eta.)-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-one]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

17

THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:379055 CAPLUS

DOCUMENT NUMBER: 131:129567

TITLE: Dynamic Kinetic Resolution of Secondary

Diols via Coupled Ruthenium and Enzyme Catalysis

AUTHOR(S): Persson, B. Anders; Huerta, Fernando F.; Baekvall, Jan-E.

CORPORATE SOURCE: Department of Organic Chemistry, Uppsala University,

Uppsala, SE-751 21, Swed.

SOURCE: Journal of Organic Chemistry (1999), 64(14), 5237-5240

CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 131:129567

AB Enzymic acylation of secondary sym. diols (as meso/dl mixts.) in

combination with ruthenium-catalyzed isomerization of the diol led to

efficient dynamic kinetic resoln. In this way, a meso/dl mixt.

of the diol was transformed to enantiomerically pure (R,R)-diacetate,

making efficient use of all the diol material. For some of the flexible

substrates, substantial amts. of meso-diacetates were formed as side

products. The results indicate that the major part of the meso product is

formed via an intramol. acyl-transfer pathway.

IT 9001-62-1, Novozym 435 104439-77-2

RL: CAT (Catalyst use); USES (Uses)

(dynamic kinetic resoln. of secondary diols via coupled

ruthenium and enzyme catalysis)

RN 9001-62-1 CAPLUS

CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

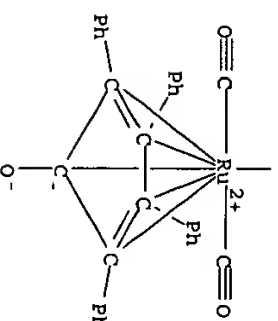
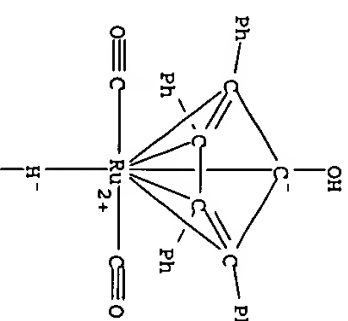
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarboxyl-.mu.-hydroxyl(1,2,3,4,5-.eta.)-1-hydroxyato-

2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-.eta.)-1-hydroxy-

2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl]di- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

29

THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:332954 CAPLUS

DOCUMENT NUMBER: 129:95085

TITLE: Asymmetric Diels-Alder reaction via enzymic kinetic

resolution using ethoxylvinyl methyl fumarate

AUTHOR(S): Kita, Yasuyuki; Imanishi, Masashi; Akai, Shuji;

Matsugi, Masato

CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Osaka

University, Osaka, 565, Japan

SOURCE: Chemical Communications (Cambridge) (1998), (11),

1183-1184

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

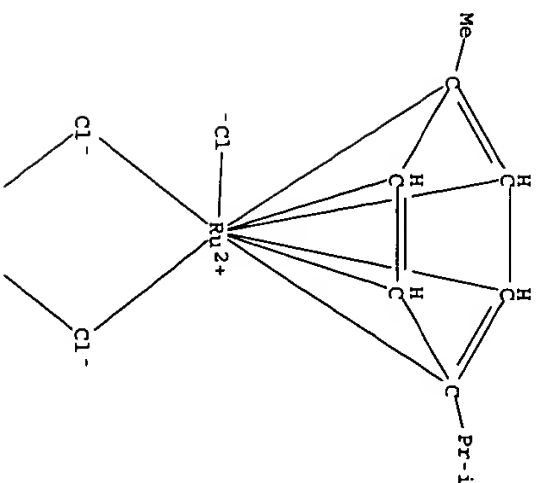
DOCUMENT TYPE: Journal

LANGUAGE: English

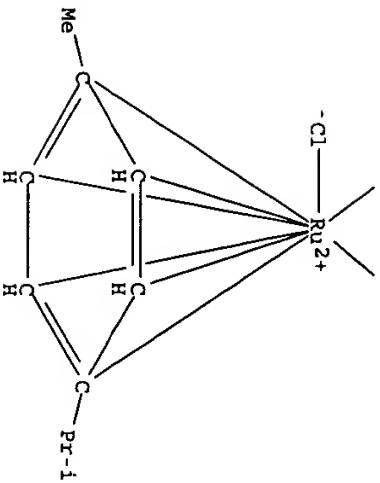
AB A domino-type asym. [4 +2] cycloaddn. reaction following TOYOBO LIP

enzymic kinetic **resoln.** using ethoxyvinyl Me fumarate is described.
 IT 9001-62-1, Lipase 52462-29-0
 RU: CAT (Catalyst use); USES (Uses)
 (asym. Diels-Alder reaction via enzymic kinetic **resoln.** using ethoxyvinyl Me fumarate)
 RN 9001-62-1 CAPLUS
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
 *** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 52462-29-0 CAPLUS
 CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-methylethyl)benzene]di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



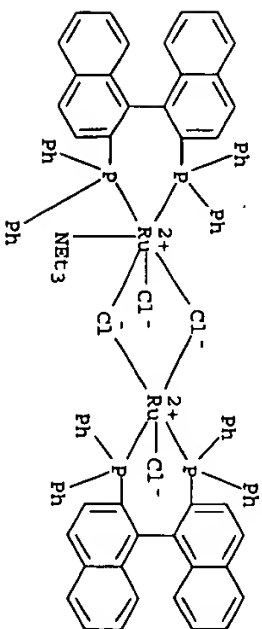
REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1998:16459 CAPLUS
 DOCUMENT NUMBER: 128:23109
 TITLE: Synthesis of 4-Sulfur-Substituted (2S,3R)-3-phenylserines by Enzymic Resolution. Enantiopure Precursors for Thiamphenicol and Florfenicol
 AUTHOR(S): Kaptein, Bernard; van Dooren, Thei J. G. M.; Boesten, Wilhelmus H. J.; Sonke, Theo; Duchateau, Alexander L. L.; Broxterman, Quirinus B.; Kamphuis, Johan
 CORPORATE SOURCE: Organic Chemistry Biotechnology Section Fine Chemicals, DSM Research, Geleen, 6160 MD, Neth.
 SOURCE: Organic Process Research & Development (1998), 2(1), 10-17
 CODEN: OPRDFK; ISSN: 1083-6160
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 128:23109
 GI



AB Enantiomerically pure 4-methylthio- and 4-methylsulfonyl-substituted (2S,3R)-3-phenylserines I (R = Mes, MeSO2) are prepd. by enzymic **resoln.** of the corresponding **racemic** threo amides using the amidase from Ochrobactrum anthropi NCIMB 40321. The unwanted (2R,3S)-amide enantiomers are sepd. from the enantiopure amino acids and easily **racemized** after Schiff base formation with the corresponding 4-(methylthio)- and 4-(methylsulfonyl)benzaldehyde. The **racemization** can be combined with the prepn. of the **racemic** amides by aldol reaction under crysln. conditions to yield only the threo isomers. Enantiopure phenylserines I (R = Mes, MeSO2) are thus obtained in 78% and 62% overall yields starting from the corresponding substituted benzaldehydes. I (R = Mes) is reduced to diol II with NaBH4/H2SO4 and can be used for the synthesis of thiamphenicol and florfenicol.

IT 9001-62-1, Lipase 109361-17-3
 RU: CAT (Catalyst use); USES (Uses)
 (asym. synthesis of sulfur-substituted phenylserines by enzymic **resoln.** of **racemic** amides and **racemization** of unwanted stereoisomers)
 RN 9001-62-1 CAPLUS
 CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)
 *** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 109361-17-3 CAPLUS
 CN Ruthenium, bis[(1R)-[1,1'-binaphthalene]-2,2'-diylbis(diphenylphosphine-.kappa.P)]di-.mu.-chlorodichloro(N,N-diethylethanamine)di- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:407237 CAPLUS
DOCUMENT NUMBER: 127:135610

TITLE: Enzymic resolution of alcohols coupled with ruthenium-catalyzed racemization of the substrate alcohol

AUTHOR(S): Larsson, Anna L. E.; Persson, B. Anders; Backvall, Jan-E.

CORPORATE SOURCE: Department Organic Chemistry, Uppsala University, Uppsala, S-75121, Sweden.

SOURCE: Angewandte Chemie, International Edition in English (1997), 36(11), 1211-1212

CODEN: ACIEAY; ISSN: 0570-0833

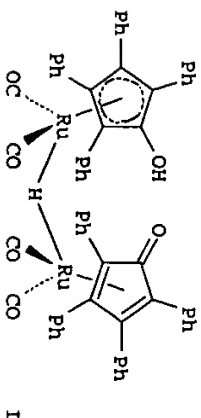
PUBLISHER: Wiley-VCH

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 127:135610

GI



I

AB The ruthenium-catalyzed racemization of (+)-(R)-alpha-methylbenzenemethanol was coupled with an enzyme-catalyzed transesterification to give the resolved alc. deriv. Thus, the combination of catalyst I, 4-chlorophenyl acetate and Novozym 435 in the reaction of (+)-(R)-alpha-methylbenzenemethanol gave (R)-alpha-methylbenzenemethanol acetate in high yield and high enantiomeric purity.

IT 9001-62-1, Novozym 435 104439-77-2

RL: CAT (Catalyst use); USES (Uses)
(ruthenium-catalyzed racemization and sequential enzymic resolu. of alcs.)

RN 9001-62-1 CAPLUS

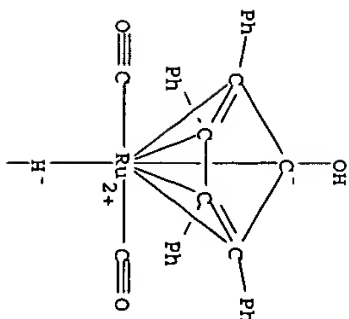
CN Lipase, triacylglycerol (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

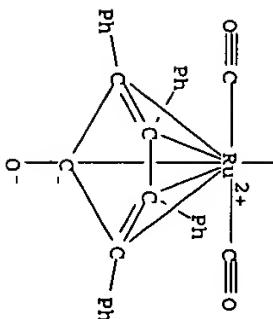
RN 104439-77-2 CAPLUS

CN Ruthenium, tetracarbonyl-.mu.-hydro[(1,2,3,4,5-eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] [(1,2,3,4,5-eta.)-1-hydroxy-2,3,4,5-tetraphenyl-2,4-cyclopentadien-1-yl] di- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> logoff

ALL L# QUERIES AND ANSWER SETS ARE DELETED AT LOGOFF

LOGOFF? (Y)/N/HOLD:Y

COST IN U.S. DOLLARS

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

SINCE FILE ENTRY	TOTAL SESSION
122.08	136.00
-15.94	-15.94

STN INTERNATIONAL LOGOFF AT 13:52:06 ON 08 JAN 2004